CLAIMS

What we claim is:

1. A method of generating an immune response to an antigen in a host, which comprises:

intranasally administering to said host an antigen coupled to a targeting moiety specific for surface structures of antigen-presenting cells.

2. The method of claim 1 wherein said antigen-presenting cells are selected from the group consisting of class I or class II major histocompatibility expressing cells (MHC), B-cells, T-cells, professional antigen-presenting cells including dendritic cells, and $CD4^+$ cells.

3. The method of claim 2 wherein the targeting moiety is a monoclonal antibody or a fragment thereof.

4. The method of claim 3 wherein the antigen is a protein, peptide, carbohydrate or ligand.

5. The method of claim 4 wherein the antigen is derived from a pathogen and said immune response is a protective immune response against disease caused by said pathogen.

6. The method of claim 5 wherein the immune response is an IgG or an IgA immune response.

7. The method of claim 5 wherein the host is a human host.

8. The method of claim 1 wherein said antigen is coupled to said targeting moiety through a heterobifunctional linking molecule.

9. In combination with a disperser for dispersing as an aerosol, atomized spray or liquid drops for intranasal administration to generate an immune response in a host, a composition comprising an immunologically-effective amount of an immunogenic molecule comprising an antigen coupled to a targeting moiety specific for surface structures of antigen-presenting cells and a pharmacologically-acceptable carrier suitable for intranasal administration.